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Title

Developing an innovative evidence-based virtual concussion exam for family physicians

Priority 1 (Research Category)

Education and training

Presenters

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Abstract

Context: Best practise guidelines recommend conducting a comprehensive medical assessment including a detailed history and physical examination to diagnose concussion and rule-out a more severe diagnosis. Exponential increase in virtual care utilization by family physicians (FP) during the COVID-19 pandemic has increased demand for new training tools in virtual evaluation. Objective: To develop a virtual concussion exam (VCE) manual for FPs. Study Design: Quality improvement method of a PDSA cycle (Plan-Do-Study-Act) with qualitative and quantitative data collection for development and implementation. Setting: Community-based primary care. Population Studied: FPs were eligible if they practised comprehensive family medicine in Ontario and provided virtual visits. A total of thirteen FPs practising in Ottawa or Toronto participated (N=13). Intervention: The study included four phases: 1) adapting best practise concussion care to create a comprehensive VCE training resource, 2) training FPs virtually using VCE materials, 3) collecting feedback from FPs during training sessions, via post-training surveys and semi-structured 1:1 interviews several months after training, and 4) iteratively adapting the VCE manual to incorporate additional resources based on PDSA cycle. Outcome Measures: We measured FP self-reported comfort on conducting a concussion VCE and perceived value of both VCE training and the manual. Results: 80% of participants reported no experience in performing a virtual concussion exam prior to the pandemic. All participants reported greater comfort with the VCE following the training. Common primary care exam elements (e.g., cranial nerve, face and jaw exams) were more comfortable for FPs than concussion-specific elements such as vestibular-oculomotor screening and balance assessment. Throughout the study, FPs requested additional instruction on identifying and managing abnormal findings. Following training, most participants reported confidence in conducting a VCE. Several participants mentioned the time requirement to conduct a complete VCE as a potential barrier. The training manual was viewed as a useful training and refresher tool. Conclusion: A VCE training manual based on best practise guidelines was developed to meet the needs of FPs. The VCE will

facilitate diagnosis and management of concussion and contribute to the development of standards and training tools for virtual primary care.